

LUBE Hybrid Lubricant



High performance lubricant which Incorporates all the advantages of both oil & grease, at the same time eliminating the disadvantages of both.

■ Next generation lubricant which contributes to protecting the environment.

- Reducing lubricant consumption
- Preventing the deterioration and decomposition of the cutting fluids drastically reducing hazardous waste disposal.
- Reducing the abrasion of machine parts

Advantages of Oil: Liquidity excellent migration properties, transport properties and no solidification.

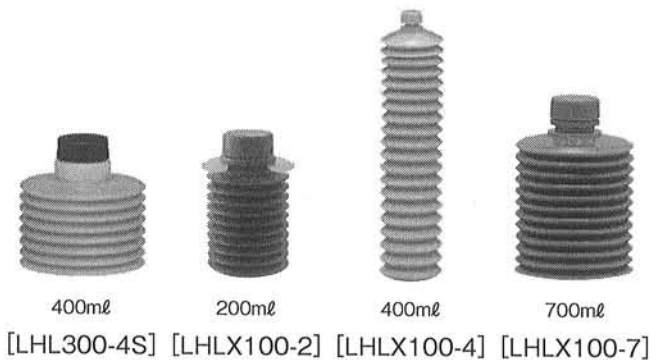
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Advantages of Grease: High load carrying capacity, wear resistance, excellent oil film retention and adhesion properties

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Incorporating the advantages of Oil and Grease

| Model | | | |
|------------|-------------|----------|--------|
| Model | Part Number | Capacity | Color |
| LHL300-4S | 249113 | 400ml | yellow |
| LHL300-7 | 249112 | 700ml | |
| LHL X100-2 | 249139 | 200ml | Brown |
| LHL X100-4 | 249136 | 400ml | |
| LHL X100-7 | 249137 | 700ml | |



LHL-X100 Performance Test Data

- **Excellent load-carrying capacity and wear resistance**
The excellent load-carrying capacity and wear resistance prevent seizures and excessive wear.
- **Excellent water resistance and corrosion resistance**
LHL is versatile to emulsification and softening even when water is introduced. In addition, its excellent corrosion resistance prevents the development of rust and pitting.
- **Excellent migration property**
Developed as lubricants for centralized lubrication systems, LHL has excellent transport property and supplying LHL in the right amount at the right time guarantees ideal lubrication effects.

Fretting Resistance Test Utilizing the ASTM F4170 Fafnir Test

Testing Method

In conformity with ASTM D 4170 Fafnir Test

[Testing Conditions]

Shaft : ANDREWS W 5/8

Weight : 2450N (Ball 9pcs, Surface Pressure : 1.9GPa)

Rolling Angle : 12° (Rolling Width : Approx. 3.0mm)

Rolling Cycle : 3.4Hz (Approx. 200 cycles)

Time Duration : 10h

Temperature : Room temperature

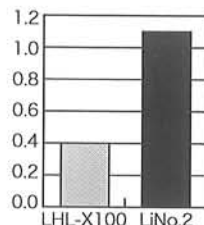
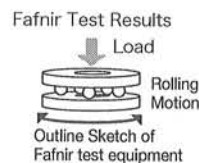
Warm-up Operation : No

Amount of lubricant applied : 1.0 + 0.05g per bearing

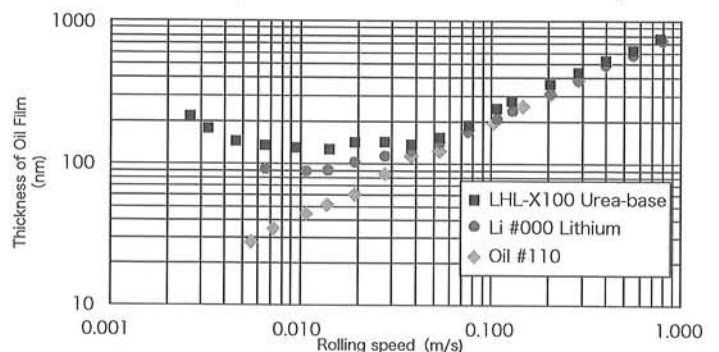
Amount of abrasion : 0.2 + 0.01g

[Evaluation Method]

Amount of abrasion : Measuring the decrease in the mass of each race.



Thickness of Oil Film (LHL-X100·Lithium-based Grease·Oil)



LHL-X100 Special Urea Grease provides thicker oil films in slow rolling speed range. Having tested the performance of lubricants by focusing on thickness of oil film provided by each lubricant, we found that the oil films become thinnest when rolling speeds become 0m/s (or all most 0m/s). Both greases provide thicker oil films than oil. LHL-X100, however, (a special urea grease) provides even thicker oil films than lithium grease. The test results prove that LHL-X100 prevents oil film deficiencies more effectively and efficiently which eliminates stick slip.